Mathematics

Practice Test Paper 2

(Chapter 5: Arithmetic Progressions)

Class X | 2026–27

Time Allowed: 45 Minutes | Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. The paper has four sections: A, B, C and D.
2. Section A - 5 marks; Section B - 8 marks; Section C - 9 marks; Section D - 3 marks.
3. Choose one correct option in Section A. Show the necessary steps and reasoning in Sections B, C and D.
4. Use algebraic methods where required. Use of calculators is not allowed.

SECTION A

(5 questions × 1 mark = 5 marks)

1. For the constant AP −4, −4, −4, …, d equals:

(A) 0 (B) −4

(C) 4 (D) 1

2. The thirtieth term of the AP 10, 7, 4, … is:

(A) 97

(B) 77

(C) −87

(D) −77

3. If $a_n = 3n - 5$, the fifth term is:

(A) 5 (B) 10

(C) 15 (D) 20

4. The sum of the first ten positive even integers is:

(A) 100

(B) 120

(C) 110

(D) 90

5. If k, 2k − 1 and 2k + 1 are consecutive terms of an AP, k is:

(A) 3 (B) 2

(C) 5 (D) −3

SECTION B

(4 questions × 2 marks = 8 marks)

6. The seating rows shown continue with three more seats in each row. Find the number of seats in row 8 and in the first eight rows altogether.



7. Show that $\sqrt{2}, \sqrt{8}, \sqrt{18}, \sqrt{32}, \ldots$ forms an AP, and find its next term.

8. Find the sum of the first 12 terms of the AP $-37, -33, -29, \ldots$.

9. The seventeenth term of an AP exceeds its tenth term by 7. Find the common difference.

SECTION C

(3 questions × 3 marks = 9 marks)

10. An AP has 50 terms. Its third term is 12 and its last term is 106. Find its twenty-ninth term.

11. The first term of an AP is 5, the last term is 45 and the sum is 400. Find the number of terms and common difference.

12. Seven cash prizes total ₹700. Each prize is ₹20 less than the preceding prize. Find all seven prizes in descending order.

SECTION D

(Application Based Question - 3 marks)

13. Shakila deposits ₹100 on her daughter's first birthday and increases the birthday deposit by ₹50 each year. Ignore interest.

(i) What is the common difference in the deposits?

(ii) Find the deposit on the twenty-first birthday.

(iii) Find the total deposited through the twenty-first birthday.